ABSTRACT

A radiologist workstation program capable of performing the methods of: (a) losslessly compressing an image by using a sample of pixel neighborhoods to determine a series of predictive coefficients values related to the pixel neighborhoods; (b) lossy compressing an image to a predetermined ratio by adjusting the quality parameter in a quality controlled compression routine; (c) adjusting the compression ratio of image data based upon the available bandwidth of a network link across which the image is transmitted; (d) encapsulating audio data in a DICOM object and selectively retrieving the data; (e) performing an improved integer based ray tracing method by establishing a ray angle from an observer position and adjusting the ray angle such that the directional components of the ray angle are rational numbers; and (f) reducing flicker caused by a magnifying window moving across an image on the display screen by determining what portion of a first window position is not covered by a new window position and restoring from memory that portion of the image which corresponds to the portion of the first window not covered by the second window.

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